Postdoctoral research fellow position available in the Molecular and Cellular Plasticity in Cardiovascular Diseases group at the UMRS 1166 – ICAN in Paris, France.
https://recherche-cardiovasculaire-metabolique.fr/

The UMRS 1166 – ICAN (Research unit on cardiovascular and metabolic diseases) is a dynamic research center located in Paris center that comprises internationally recognized groups focusing on cardiovascular and metabolic diseases.

We seek to hire a highly motivated postdoctoral fellow to **investigate the (co)trafficking of sodium channel and protein partners** in the team led by Elise Balse at the UMRS 1166-ICAN, in collaboration with the team of Franck Perez, head of the cell Biology and Cancer Unit at the Curie Institute, Paris.

The post doctorate will work with research assistants and scientists to transpose the Retention using selective hooks (RUSH) system in cardiac myocytes. RUSH is a two-state assay based on the reversible interaction of a hook protein fused to core streptavidin and stably anchored in a donor compartment (e.g. ER) with a fluorescent reporter protein of interest fused to streptavidin-binding peptide (SBP). Biotin addition causes a synchronous release of the reporter from the hook. Therefore, the flow of different proteins, here ion channels and regulatory partners, can be visualized and quantitated simultaneously.

Highly motivated scientists with a strong interest in ion channel trafficking in relation with cardiac arrhythmias mechanisms are encouraged to apply. The candidate should have a PhD in Life Sciences with a **strong knowledge in molecular and cellular biology**. Solid experience with **viral vectors and imaging techniques** (manipulation and software-based analysis) is mandatory. Experience in cardiac cell isolation and manipulation would also be appreciated but is not obligatory. Strong writing and oral communication skills will be needed. The candidate should have demonstrated innovation, initiative, problem-solving attitude, and ability to work well both independently and as a member of a team. Working languages will be English and French.

The position, opened for two years (with a possibility of one-year renewal), offers creative and stimulating working conditions in dynamic and international research environment. Salary will be in accordance with the University scale, depending on experience. Application deadline is February 1st 2021 (but will remain open until suitable candidates are found).

CV, list of publications, short description of previous research projects and experience and contact information for (at least) two referees should be sent by email to : elise.balse@inserm.fr

Publications related to the project:

- Beuriot A, Eichel CA, Dilanian G, Louault F, Melgari D, Doisne N, Coulombe A, Hatem SN, Balse E. Distinct calcium/calmodulin-dependent serine protein kinase domains control cardiac sodium channel membrane expression and focal adhesion anchoring. Heart Rhythm. 2020 May;17(5 Pt A):786-794. doi: 10.1016/j.hrthm.2019.12.019.
- Eichel CA, Beuriot A, Chevalier MY, Rougier JS, Louault F, Dilanian G, Amour J, Coulombe A, Abriel H, Hatem SN, Balse E. Lateral Membrane-Specific MAGUK CASK Down-Regulates NaV1.5 Channel in Cardiac Myocytes. Circ Res. 2016 Aug 5;119(4):544-56. doi: 10.1161/CIRCRESAHA.116.309254.
- Balse E, Steele DF, Abriel H, Coulombe A, Fedida D & Hatem SN. Dynamic of ion channel expression at the plasma membrane of cardiomyocytes. Physiol Rev. 2012 Jul;92(3):1317-58. doi: 10.1152/physrev.00041.2011.
- Boncompain G, Divoux S, Gareil N, de Forges H, Lescure A, Latreche L, Mercanti V, Jollivet F, Raposo G, Perez F. Synchronization of secretory protein traffic in populations of cells. Nat Methods. 2012 May;9(5):493-8. PubMed PMID: 22406856. DOI: 10.1038/nmeth.1928.